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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,308	09/27/2006	Yasuyuki Arai	0756-7836	3549

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EXAMINER	
WANG, JACK K	

ART UNIT	PAPER NUMBER
2612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,308	ARAI ET AL.	
	Examiner	Art Unit	
	JACK WANG	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/23/2009 has been entered.

Claim Objections

2. Claim 8 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim to any one of Claims 1 and 6. See MPEP § 608.01(n). For the purpose of art rejection below the claim has been interpreted as -- The product management system according to Claims 1……..--. Appropriate correction is required.

3. Claim 11 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim to any one of Claims 9 and 10. See MPEP § 608.01(n). For the purpose of art rejection below the claim has been interpreted as -- The product management system according to Claims 9……..--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nicholson et al. (Pub # US 2002/0021208 A1).

Consider claim 1, Nicholson et al. clearly show and discloses a product management system comprising: a resonance circuit (passive repeater apparatus) (40, Fig. 8A); and a reader/writer (inherent within RFID system) for at least one of reading information stored in a semiconductor device(tag) (14, Fig. 8A) and writing information in the semiconductor device (14, Fig. 8A) [0026], wherein the resonance circuit comprises an antenna coil (16, Fig. 8A) and a capacitor (embedded within antenna circuit) [0034 lines 1-4], wherein a packing material (48a, Fig. 8A) for packing a product (49, Fig. 8B) is provided with the resonance circuit (passive repeater apparatus) (40, Fig. 8A), wherein the product (49, Fig. 8B) is provided with the semiconductor device (RFID tag) (14, Fig. 8B), wherein the resonance circuit (passive repeater apparatus) (40, Fig. 8A) can communicate with the reader/writer (inherent within RFID system) and the semiconductor device (RFID tag) (14, Fig. 8A).

Consider claim 2, Nicholson et al. clearly show and discloses the product management system, wherein a communication method between the reader/writer and the resonance circuit is identical to a communication method between the resonance circuit and the semiconductor device [0010].

Consider claim 3, Nicholson et al. clearly show and discloses the product management system, wherein the communication method is an electromagnetic induction method [0006 lines 1-3].

Consider claim 4, Nicholson et al. clearly show and discloses the product management

system, wherein a communication method (active method) between the reader/writer and the resonance circuit (15, Fig, 8B) is different from a communication method (passive) between the resonance circuit (15, Fig. 8B) and the semiconductor device (14, Fig. 8B) [0006 lines 1-3].

Consider claim 8, Nicholson et al. clearly show and discloses the product management system, wherein the semiconductor device is selected from the group of an ID tag, an ID chip, an ID label, an ID seal and an ID sticker [0039].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (Pub # US 2002/0021208 A1) as applied to claim 4 and 6 above, and further in view of Bridgelall et al. (Pub # US 2004/0217867).

Consider claims 5 and 7, Nicholson et al. teaches similar invention, except the product management system, wherein the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method.

In the same field of endeavor, Bridgelall et al. teaches the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method [0027 lines 17-24] for the benefit of improving the communication distance.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method as shown in Bridgelall et al., in Nicholson et al. device for the benefit of improving the communication distance.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (Pub # US 2002/0021208 A1).

Consider claim 6, Nicholson et al. clearly show and discloses a product management system comprising: a resonance circuit (passive repeater apparatus) (40, Fig. 8A); and a reader/writer (inherent within RFID system) for at least one of reading information stored in a semiconductor device(tag) (14, Fig. 8A) and writing information in the semiconductor device (14, Fig. 8A) [0026], wherein the resonance circuit comprises an antenna coil (16, Fig. 8A) and a capacitor (embedded within antenna circuit) [0034 lines 1-4], wherein a packing material (48a, Fig. 8A) for packing a product (49, Fig. 8B) is provided with the resonance circuit (passive repeater apparatus) (40, Fig. 8A), wherein the product (49, Fig. 8B) is provided with the semiconductor device (RFID tag) (14, Fig. 8B), wherein the resonance circuit (passive repeater apparatus) (40, Fig. 8A) can communicate with the reader/writer (inherent within RFID system) and the semiconductor device (RFID tag) (14, Fig. 8A), except wherein a communication range between the reader/writer and the resonance circuit is longer than a communication range between the resonance circuit and the semiconductor device.

Although Nicholson et al. does not specifically disclose a communication range between

the reader/writer and the resonance circuit is longer than a communication range between the resonance circuit and the semiconductor device. He does disclose the invention for extending the read/write range between an RFID reader/writer and a designated tag [0026]. Since the communication range betweens resonance circuit (passive repeater apparatus) (40, Fig. 8A) and semiconductor device (RFID tag) (14, Fig. 8A) is fixed. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to determine that the extended read/write range as shown in Nicholson et al. is longer then a fixed range between resonance circuit and semiconductor device.

9. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall et al. (Pub # US 2004/0217867 A1), and further in view of Van De Walle et al. (Pub # US 2004/0245519 A1) and Nicholson et al. (Pub # US 2002/0021208 A1).

Consider claim 9, Bridgelall et al. teaches a method comprising: sending at least one of a first signal (38, Fig. 4) comprising first information and a first electric power from a reader/writer (interrogator) to a resonance circuit (relay device) (35, Fig. 4), sending at least one of a second signal (36, Fig. 4) comprising the first information and a second electric power from the resonance circuit (relay device) (23, Fig. 4) to a semiconductor device (RFID tags) (22, Fig. 1) in response to a receipt of said at least one of the first signal (38, Fig. 4) and the first electric power; sending a third signal (34, Fig. 4) comprising second information from said semiconductor device (RFID tags) (22, Fig. 1) to the resonance circuit (relay device) (23, Fig. 4) in response to a receipt of said at least one of the second signal (34, Fig. 4) and the second electric power by the semiconductor device (relay device) (23, Fig. 4), sending a fourth signal

(36, Fig. 4) comprising said second information from the resonance circuit (relay device) (35, Fig. 4) to the reader/writer (interrogator) [0027], except wherein said semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna, and wherein the semiconductor device is attached to a product, the product is contained in a packing material, the resonance circuit is attached to the packing material and the reader/writer is disposed outside of the packing material.

In the same field of endeavor, Van De Walle et al. teaches the semiconductor device (transponder) (100, Fig. 6) comprises a thin film integrated circuit comprising a thin film transistor (10, Fig. 6) [0039 lines 12-15], and an antenna (41, Fig. 6) [0039 lines 28-29] for the benefit of providing microcontact printing to reduce the manufacturing cost of RFID tag.

Furthermore, Nicholson et al. teaches wherein the semiconductor device (RFID tag) (14, Fig. 8B) is attached to a product (49, Fig. 8B), the product (49, Fig. 8B) is contained in a packing material (48b, Fig. 8B), the resonance circuit (17, Fig. 8B) is attached to the packing material (48b, Fig. 8B) and the reader/writer is disposed outside of the packing material (48b, Fig. 8B) for the benefit of extending the read/write range of the designated tag.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna as shown in Van De Walle et al., and the semiconductor device is attached to a product, the product is contained in a packing material, the resonance circuit is attached to the packing material and the reader/writer is disposed outside of the packing material as shown in Nicholson et al., in Bridgelall et al. method for the benefit of providing microcontact printing to reduce the manufacturing cost of RFID tag and extending the

read/write range of the designated tag.

Consider claim 10, Bridgelall et al. teaches a method comprising: sending at least one of a first signal (38, Fig. 4) comprising first information and a first electric power from a reader/writer (interrogator) to a resonance circuit (relay device) (35, Fig. 4), sending at least one of a second signal (36, Fig. 4) comprising the first information and a second electric power from the resonance circuit (relay device) (23, Fig. 4) to a semiconductor device (RFID tags) (22, Fig. 1) in response to a receipt of said at least one of the first signal (38, Fig. 4) and the first electric power; sending a third signal (34, Fig. 4) comprising second information from said semiconductor device (RFID tags) (22, Fig. 1) to the resonance circuit (relay device) (23, Fig. 4) in response to a receipt of said at least one of the second signal (34, Fig. 4) and the second electric power by the semiconductor device (relay device) (23, Fig. 4), sending a fourth signal (36, Fig. 4) comprising said second information from the resonance circuit (relay device) (35, Fig. 4) to the reader/writer (interrogator) [0027], sending a fifth signal comprising said second information from the second resonance circuit to the first resonance circuit, sending a sixth signal comprising said second information from the first resonance circuit to the reader/writer [0026 lines 17-25], except wherein said semiconductor device comprises a thin film integrated circuit comprising a thin film transistor and an antenna, and wherein the semiconductor device is attached to a product, the product is contained in a second packing material, the second resonance circuit is attached to the second packing material, the second packing material is contained in a first packing material, the first resonance circuit is attached to the first packing material, and the reader/writer is disposed outside of the first packing material.

In the same field of endeavor, Van De Walle et al. teaches the semiconductor device

(transponder) (100, Fig. 6) comprises a thin film integrated circuit comprising a thin film transistor (10, Fig. 6) [0039 lines 12-15], and an antenna (41, Fig. 6) [0039 lines 28-29] for the benefit of providing microcontact printing to reduce the manufacturing cost of RFID tag.

Furthermore, Nicholson et al. teaches the semiconductor device (RFID tag) (14, Fig. 8B) is attached to a product (49, Fig. 8B), the product (49, Fig. 8B) is contained in a first packing material (48b, Fig. 8B), the first resonance circuit (17, Fig. 8B) is attached to the first packing material (48b, Fig, 8B), and the reader/writer is disposed outside of the first packing material (48b, Fig, 8B) fort the benefit of extending the read/write range to designated tag. Although Nicholson et al. does not specifically disclose the second resonance circuit is attached to the second package packing material. He does disclose the first packaging material (48b, Fig, 8B) and first resonance circuit (17, Fig. 8B). Applicant has not disclosed that the second packaging material and second resonance circuit provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with any redundant intermediate layers of packing materials and resonance circuits attached to it. Therefore, it would have been obvious to one of ordinary skill in this art to add additional redundant layers to obtain the invention as specified in the claim 10.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna as shown in Van De Walle et al. and the semiconductor device is attached to a product, the product is contained in a second packing material, the second resonance circuit is attached to the second packing material, the second

packing material is contained in a first packing material, the first resonance circuit is attached to the first packing material, and the reader/writer is disposed outside of the first packing material as shown in Nicholson et al., in Bridgelall et al. method for the benefit of providing microcontact printing to reduce the manufacturing cost of RFID tag and extending the read/write range to designated tag.

Consider claim 11, Bridgelall et al. clearly shown and disclose the method, wherein the semiconductor device is an ID tag [0003 lines 5-8].

Consider claim 12, Bridgelall et al. clearly shown and disclose the method, wherein the first packaging material (40, Fig. 5) is a container [0028 lines 6-9].

10. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (Pub #US 2002/0021208 A1) in view of Van De Walle et al. (Pub # US 2004/0245519 A1).

Consider claim 13, Nicholson et al. teaches a product management system comprising: a resonance circuit (passive repeater apparatus) (40, Fig. 8A); and a reader/writer (inherent within RFID system) for at least one of reading information stored in a semiconductor device(tag) (14, Fig. 8A) and writing information in the semiconductor device (14, Fig. 8A) [0026], wherein the resonance circuit comprises an antenna coil (16, Fig. 8A) and a capacitor (embedded within antenna circuit) [0034 lines 1-4], wherein a packing material (48a, Fig. 8A) for packing a product (49, Fig. 8B) is provided with the resonance circuit (passive repeater apparatus) (40, Fig. 8A), wherein the product (49, Fig. 8B) is provided with the semiconductor device (RFID tag) (14, Fig. 8B), wherein the resonance circuit (passive repeater apparatus) (40, Fig. 8A) can communicate with the reader/writer (inherent within RFID system) and the semiconductor device (RFID tag)

(14, Fig. 8A), except wherein the semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna.

In the same field of endeavor, Van De Walle et al. teaches the semiconductor device (transponder) (100, Fig. 6) comprises a thin film integrated circuit comprising a thin film transistor (10, Fig. 6) [0039 lines 12-15], and an antenna (41, Fig. 6) [0039 lines 28-29] for the benefit of providing microcontact printing to reduce the manufacturing cost of RFID tag.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna as shown in Van De Walle et al., in Nicholson et al. device for the benefit of providing microcontact printing to reduce the manufacturing cost of RFID tag.

Consider claim 14, Nicholson et al. clearly show and discloses the product management system, wherein a communication method between the reader/writer and the resonance circuit is identical to a communication method between the resonance circuit and the semiconductor device [0010].

Consider claim 15, Nicholson et al. clearly show and discloses the product management system, wherein the communication method is an electromagnetic induction method [0006 lines 1-3].

Consider claim 16, Nicholson et al. clearly show and discloses the product management system, wherein a communication method (active method) between the reader/writer and the resonance circuit (15, Fig, 8B) is different from a communication method (passive) between the resonance circuit (15, Fig. 8B) and the semiconductor device (14, Fig. 8B) [0006 lines 1-3].

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. (Pub # US 2002/0021208 A1) in view of Van De Walle et al. (Pub # US 2004/0245519 A1) as applied to claim 16 above, and further in view of Bridgelall et al. (Pub # US 2004/0217867).

Consider claim 17, Nicholson et al. and Van De Walle et al. combined references teaches similar invention, except the product management system, wherein the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method.

In the same field of endeavor, Bridgelall et al. teaches the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method [0027 lines 17-24] for the benefit of improving the communication distance.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method as shown in Bridgelall et al., in Nicholson et al. and Van De Walle et al. combined device for the benefit of improving the communication distance.

Response to Arguments

12. Applicant's arguments with respect to claim 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACK WANG whose telephone number is (571)272-1938. The examiner can normally be reached on M-F 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JACK WANG/
Examiner, Art Unit 2612

/Daniel Wu/
Supervisory Patent Examiner, Art Unit 2612